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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,068	03/01/2002	Torsten Grust	SVL920010034US1	4243

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EXAMINER
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NGUYEN, CINDY

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/090,068

Applicant(s)

GRUST ET AL.

Examiner

Cindy Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

This is response to communication filed 09/01/06.

### ***Response to Arguments***

Applicant's arguments have been fully considered but they are not persuasive.

Response to Applicant's arguments under 35 USC § 101 rejections.

Applicant explained at length how the claimed invention produces a useful, tangible and concrete result by converting query language statements into an imperative language statement for execution by a computing device. However, the claim invention is not clearly said by converting query language statements into an imperative language statement for execution by a computing device, and they direct to software per se and not storing any results in any physical medium after executing the imperative language statements, therefore, the claimed invention is not fall within any one of the four statutory categories as required under 35 USC § 101

Response to Applicant's arguments under 35 USC § 103 (a) rejection

Applicant argued that Xu does not disclose receiving queries because it is directed at a new type of query language-which is not intended to be converted into other languages. However, what Applicant claimed is receiving queries in a query language, the queries comprising a plurality of query terms and Xu clearly disclose receiving queries at col. 2, lines 11-12.

Applicant argued that Xu does not "interpreting" queries in a query language by associated declarative language functions therewith. In response, Xu clearly

discloses interpreting the queries by associating declarative language function see col. 2, lines 40-45.

Applicant argued that the combination does not disclose converting queries represented by declarative language statements. In response, Xu discloses the query interpreter that translates data from a language to another at col. 2, lines 40-45 and Laitinen discloses converting queries represented by declarative language function to a plurality of imperative language statement and executing the imperative language statements at col. 4, lines 36-38 and lines 45-47.

Applicant argued that the combination does not disclose converting the query language to an intermediate tree representation corresponding to the at least one declarative language function associated with the plurality of query terms, and thereafter converting the query to at least one data structure that is interpreted by an imperative language interpreter core to perform the queries. In response, Laitinen discloses converting the query language to an intermediate tree representation corresponding to the at least one declarative language function associated with the plurality of query terms, and thereafter converting the query to at least one data structure that is interpreted by an imperative language interpreter core to perform the queries see col. 4, lines 35-50.

In response to applicant's argument that Laitinen is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention.

See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Laitinen disclose converting as the declarative form of the language to an imperative form of the language, therefore Laitinen is analogous art and can be used to form a prima facie case of obviousness.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Xu discloses the query interpreter that translates data from a language to another at col. 2, lines 40-45 and Laitinen discloses converting declarative language function to a plurality of imperative language statement and executing the imperative language statements at col. 4, lines 36-38 and lines 45-47. The motivation being to reduce the expense and rapid implementation of executable involved in computer which performs converting as the declarative form of the language to an imperative form of the language.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 6, 9, 14, 19, 24 and 29 are rejected under 35 USC § 101

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The claimed invention is directed to non-statutory subject matter. the claims are not provide a practical application that produces a useful, tangible and concrete result, the claimed directed to convert one query format by converting program code from one form to another and not claimed to produces a useful result. A useful, concrete and tangible result must be either specifically recited in the claim or flow inherently therefrom.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu (US 5995958) in view of Laitinen (US 5862383).

Regarding claims 1, 6, 9, 14, 19, 24 and 29, Xu discloses: A method and a database management system adapted to process queries in a pervasive computing environment and a program product comprising computer readable program code on one or more media said program code being capable of controlling and configuring a computer system having one or more computers to perform the process of :

a. receiving queries in a query language the queries comprising a plurality of query terms (accept the queries in SQL, col. 2, lines 10-23, Xu);

b. interpreting the queries by associating at least one declarative language function with the query terms (query interpreter 29a that accepts the queries in SQL, col. 2, lines 10-23, Xu);

However, Xu didn't disclose: converting the queries represented by the at least one declarative language function to a plurality of imperative language statement and executing the imperative language statements. On the other hand, Laitinen discloses: converting the queries represented by the at least one declarative language function to a plurality of imperative language statement (col. 4, lines 35-59, Laitinen) and executing the imperative language statements (col. 4, lines 49-59, Laitinen). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include converting the queries represented by the at least one declarative language function to a plurality of imperative language statement and executing the imperative language statements in the system of Xu as taught by Laitinen. The motivation being to reduce the expense and rapid implementation of executable involved in computer which performs converting as the encoding and the decoding function.

Regarding claims 2, 10, 15, 20, 25, 30 all the limitations of these claims have been noted in the rejection of claims 1, 9, 14, 19, 24 and 29 above, respectively. In addition, Xu/Laitinen discloses: comprising converting the query language to an intermediate tree representation corresponding to the at least one declarative language function associated with the plurality of query terms, and thereafter converting the

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query to at least one data structure that is interpreted by an imperative language interpreter core to perform the queries (col. 4, lines 35-59, Laitinen).

Regarding claims 3, 11, 16, 21, 26, 31 all the limitations of these claims have been noted in the rejection of claims 2, 10, 15, 20, 25 and 30 above, respectively. In addition, Xu/Laitinen discloses: wherein the declarative language function is identified by a pointer to further code such that the declarative language function is treated as data within the plurality of imperative language statements (col. 4, lines 35-59).

Regarding claims 4, 7, 12, 17, 22, 27 and 32, all the limitations of these claims have been noted in the rejection of claim 1, 6, 9, 14, 19, 24 and 29 above, respectively. In addition, Xu/Laitinen discloses: wherein the declarative language is chosen from the group consisting of ML, LISP, and HASKELL. On the other hand, Steele discloses: ML, LISP and HASKELL (col. 13, lines 10 to col. 14, lines 15, Xu) .

Regarding claims 5, 8, 13, 18, 23, 28 and 33 all the limitations of this claim have been noted in the rejection of claims 1, 6, 9, 14, 19, 24 and 29 above, respectively. In addition, Xu/Laitinen disclose: wherein the imperative language is chosen from the group consisting of C, C++, Java, Modula2, and SmallTalk (col. 4, lines 60 to col. 5, lines 15, Laitinen).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***1. Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Cindy Nguyen

October 18, 2006